

**Amendments to the Specification:**

Page 1, please replace paragraphs 1 and 2 as follows:

Availability and Location Predictor Using Call Processing Indications

BACKGROUND OF THE INVENTION

Field of the Invention

This invention relates generally to context-aware call handling in telephone systems, and more particularly to a method and apparatus for generating availability and location predictors using indications generated by call processing actions.

Background of the Invention

Description of the Prior Art

To date, presence and availability capabilities have been confined generally to instant messaging systems such as Microsoft Messenger and ICQ. Users are presented with availability information in the form of buddy lists from which they are able to see which ones of their correspondents are available and attempt to send an instant message to them. The instant message system attempts delivery but there is no ability, such as is provided by call control in a telephony system, to forward the call to another party, take a message, etc. Thus, no solution has been provided in the prior art to the problem of missed calls due to party unavailability.

Page 1, please replace the last paragraph spanning over to page 2 as follows:

Summary of the Invention

SUMMARY OF THE INVENTION

The present invention addresses the problem discussed above by making availability generation automatic, rather than based on a required action on the part of the user. In particular, a method of evidence gathering is provided that surmises (i.e. makes guesses) about user availability from his/her interactions with a PBX system. The interactions are gathered as awareness information and processed by an algorithm into availability information. By using awareness information as evidence, the algorithm makes predictions about the users' availability or makes decisions in call processing. This information is fed back into a shared database (e.g. a tuple space) as assertions that indicate high level assessments about the user's state. These assessments are then used by call processing components to make decisions on call handling.

Page 2, please replace the last paragraph as follows:

Brief Description of the Drawings

BRIEF DESCRIPTION OF THE DRAWINGS

A detailed description of the invention is set forth herein below, with reference to the following drawings, in which:

Page 3, please replace the sixth paragraph as follows:

Detailed Description of the Preferred Embodiment

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Figure 1 is a block diagram of a system according to the present invention for combining call processing via call control 1 with a presence system 3. A PBX 5 provides conventional active call control functions as well as newly enabled applications that rely on presence information. More particularly, PBX 5 is enabled with an HCI application by which external applications may be made aware of call control events which may occur in respect of any number of specific subscribers. For example, PBX 5 may be one either a Mitel 3200 or 3300 ICP with MiTAI interface. Interpretation block 7 contains an application that subscribes to these call control events to provide an indication of user availability. Thus, the presence information used by call control 1 is generated both by its own actions and from information generated by presence system 3. Information from these two sources is combined for individual users in the Interpretation block 7. In IETF terms, this functions as PUA 9 (Presence User Agent), which derives presence information from user activities to create an indication of availability for individual users that is stored in an internal database.